



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2011-1109; Directorate Identifier 2011-NE-33-AD; Amendment 39-16863; AD 2011-23-12]**

**RIN 2120-AA64**

**Airworthiness Directives;** Rolls-Royce plc RB211-524G2-19; -524G2-T-19; -524G3-19; -524G3-T-19; 524H2-19; -524H2-T-19; -524H-36; and -524H-T-36 Turbofan Engines

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule; request for comments.

**SUMMARY:** We are adopting a new airworthiness directive (AD) for the products listed above. This AD results from mandatory continuing airworthiness information (MCAI) issued by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as:

Several instances of fan blade cracking have been reported. The results of the subsequent technical investigation concluded that the cracking was caused by fan blade flutter at certain engine settings during prolonged ground running.

This condition, if not corrected, could affect the integrity of the fan blades, leading to cracking of multiple fan blades and could possibly result in engine failure and release of uncontained high energy debris.

We are issuing this AD to prevent fan blade flutter, which could result in an uncontained engine failure and damage to the airplane.

**DATES:** This AD becomes effective [Insert date 15 days after date of publication in the FEDERAL REGISTER].

We must receive comments on this AD by [Insert date 30 days after date of publication in the FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of Rolls-Royce plc Alert Service Bulletin No. RB.211-73-AG054, Revision 2, dated June 29, 2011, listed in the AD as of [Insert date 15 days after date of publication in the FEDERAL REGISTER].

**ADDRESSES:** You may send comments by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov> and follow the instructions for sending your comments electronically.
- Mail: U.S. Department of Transportation, 1200 New Jersey Avenue SE., West Building Ground Floor, Room W12-140, Washington, DC 20590-0001.
- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.
- Fax: 202-493-2251.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone 800-647-5527) is the same as the Mail address

provided in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Alan Strom, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; telephone: 781-238-7143; fax: 781-238-7199; e-mail: alan.strom@faa.gov.

**SUPPLEMENTARY INFORMATION:**

**Discussion**

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA Airworthiness Directive 2011-0175, dated September 8, 2011 (referred to after this as “the MCAI”), to correct an unsafe condition for the specified products. The MCAI states:

Several instances of fan blade cracking have been reported. The results of the subsequent technical investigation concluded that the cracking was caused by fan blade flutter at certain engine settings during prolonged ground running.

This condition, if not corrected, could affect the integrity of the fan blades, leading to cracking of multiple fan blades and could possibly result in engine failure and release of uncontained high energy debris.

To address this potential unsafe condition, Rolls-Royce has developed modified full-authority fuel controller software in order to ensure that the engine cannot experience prolonged running on ground at engine settings that would potentially jeopardize the integrity of the fan blades.

You may obtain further information by examining the MCAI in the AD docket.

**Relevant Service Information**

Rolls-Royce plc has issued Rolls-Royce plc Alert Service Bulletin No. RB.211-73-AG054, Revision 2, dated June 29, 2011. The actions described in this service information are intended to correct the unsafe condition identified in the MCAI.

**FAA's Determination and Requirements of this AD**

This product has been approved by the aviation authority of the United Kingdom and is approved for operation in the United States. Pursuant to our bilateral agreement with the United Kingdom, they have notified us of the unsafe condition described in the MCAI and service information referenced above. We are issuing this AD because we evaluated all information provided by EASA and determined the unsafe condition exists and is likely to exist or develop on other products of the same type design.

**FAA's Determination of the Effective Date**

Since no domestic operators use this product, notice and opportunity for public comment before issuing this AD are unnecessary. Therefore, we are adopting this regulation immediately.

**Comments Invited**

This AD is a final rule that involves requirements affecting flight safety, and we did not precede it by notice and opportunity for public comment. We invite you to send any written relevant data, views, or arguments about this AD. Send your comments to an address listed under the ADDRESSES section. Include "Docket No. FAA-2011-1109; Directorate Identifier 2011-NE-33-AD" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and

energy aspects of this AD. We will consider all comments received by the closing date and may amend this AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact with FAA personnel concerning this AD. Using the search function of the Web site, anyone can find and read the comments in any of our dockets, including, if provided, the name of the individual who sent the comment (or signed the comment on behalf of an association, business, labor union, etc.). You may review the DOT's complete Privacy Act Statement in the Federal Register published on April 11, 2000 (65 FR 19477-78).

#### **Authority for This Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

## **Regulatory Findings**

We determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this AD:

1. Is not a “significant regulatory action” under Executive Order 12866;
2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and
3. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a regulatory evaluation of the estimated costs to comply with this AD and placed it in the AD docket.

## **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

## **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

## **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new AD:

2011-23-12 **Rolls-Royce plc:** Amendment 39-16863.; Docket No. FAA-2011-1109;  
Directorate Identifier 2011-NE-33-AD.

**Effective Date**

(a) This airworthiness directive (AD) becomes effective [Insert date 15 days after date of publication in the FEDERAL REGISTER].

**Affected ADs**

(b) None.

**Applicability**

(c) This AD applies to Rolls-Royce plc RB211-524G2-19; -524G2-T-19; -524G3-19; 524G3-T-19; 524H2-19; -524H2-T-19; -524H-36; and -524H-T-36 turbofan engines.

**Reason**

(d) This AD results from mandatory continuing airworthiness information (MCAI) issued by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as:

Several instances of fan blade cracking have been reported. The results of the subsequent technical investigation concluded that the cracking was caused by fan blade flutter at certain engine settings during prolonged ground running.

This condition, if not corrected, could affect the integrity of the fan blades, leading to cracking of multiple fan blades and could possibly result in engine failure and release of uncontained high energy debris.

We are issuing this AD to prevent fan blade flutter, which could result in an uncontained engine failure and damage to the airplane.

## **Actions and Compliance**

(e) Unless already done, do the following actions.

(1) Within 40 months after the effective date of this AD, modify the engine by installing a full-authority fuel controller (FAFC) featuring software at Issue 17, in accordance with Accomplishment Instructions paragraphs 3.A. through 3.B. of Rolls-Royce plc Alert Service Bulletin (ASB) No. RB.211-73-AG054, Revision 2, dated June 29, 2011.

(2) Engines which have been modified before the effective date of this AD, in accordance with previous revisions of ASB No. RB.211-73-AG054 are compliant with the requirement of paragraph (e)(1) of this AD.

(3) From the effective date of this AD, do not install an FAFC on an engine if the FAFC incorporates software prior to Issue 17.

## **FAA AD Differences**

(f) None.

## **Alternative Methods of Compliance (AMOCs)**

(g) The Manager, Engine Certification Office, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19.

## **Related Information**

(h) Refer to European Aviation Safety Agency AD 2011-0175, dated September 8, 2011, for related information.

(i) Contact Alan Strom, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA



01803; telephone: 781-238-7143; fax: 781-238-7199; e-mail: alan.strom@faa.gov, for more information about this AD.

### **Material Incorporated by Reference**

(j) You must use Rolls-Royce plc Alert Service Bulletin No. RB.211-73-AG054, Revision 2, dated June 29, 2011, to do the actions required by this AD, unless the AD specifies otherwise.

(1) The Director of the Federal Register approved the incorporation by reference of this service information under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) For service information identified in this AD, contact Rolls-Royce plc, Corporate Communications, P.O. Box 31, Derby, England, DE248BJ; phone: 011-44-1332-242424; fax: 011-44-1332-245418 or e-mail from [http://www.rolls-royce.com/contact/civil\\_team.jsp](http://www.rolls-royce.com/contact/civil_team.jsp), or download the publication from <https://www.aeromanager.com>.

(3) You may review copies at the FAA, New England Region, 12 New England Executive Park, Burlington, MA; or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>. For information on the availability of this material at the FAA, call 781-238-7125

Issued in Burlington, Massachusetts, on November 2, 2011.

Peter A. White,  
Manager, Engine and Propeller Directorate,  
Aircraft Certification Service.

